1-6

59-13

23

Portulacaceae

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cm
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0 1 2 3 4 5 6 7 8 9 10 cm

Euphorbia segetalis L. Spr III, 799
caespitosa Tenor. K II, 280
longebracteata Cand
Taurica Bess

MISSOURI BOTANICAL GARDEN
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H. B. Fr 1820

Europ. med et austr.

1	Salvia ~~glandulosa~~ pachystachys	105.	369.	40
81	S. coccinea	145 ·	370	26
8	Hedeoma ○	85.	374	87. 40
7	Hed. Drummondii var	368	84.	40
3	Scutellaria versicolor	146		22
2	Stachys ?		378	15
1.	×	83.	376	376. 377 30
6	Vanilla		404.	121 25
4	×	ad hirsutissimum var glandul.		81. 40
5		ad glandul. minus		80 (465) 30

372 is intermixt

9) Monarda austera var 371. 97. 40
hairs longer, bracts longer, ~~glandulosa~~ tip pointed more hairy (var = scattered hairs

Physalis 458 92. 301 25

Gymnogramma Eaton ~
" pulchella, var. Eaton
" "
" pedatum Gray.

Jan 11, 229
Bill, 229

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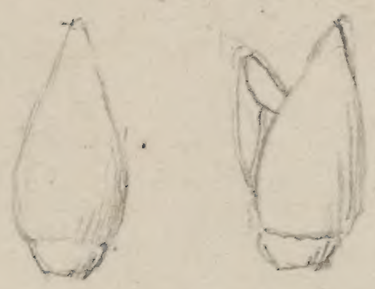
Portulaca pilosa var fruticulosa May 20 1867
N. 577 S. Cruces, Arizona

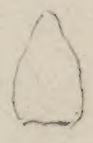
nat size

flower buff with green in centre
filaments and stigmas red

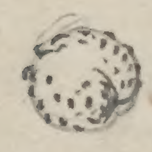
bud, magnified 2



corolla including 38 stamens



style with 5 stigmas



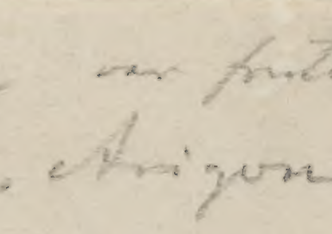
seed x10

225

base of ripe capsule

line of circumscission
line of separation of Calyx

ripe capsule X2



Surface of seed
X60
exactly like Portulaca pilosa

Pollen grain
X 415

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APOTHECARY & CHEMIST,

Cor 4th & Olive, Sts. St. Louis.

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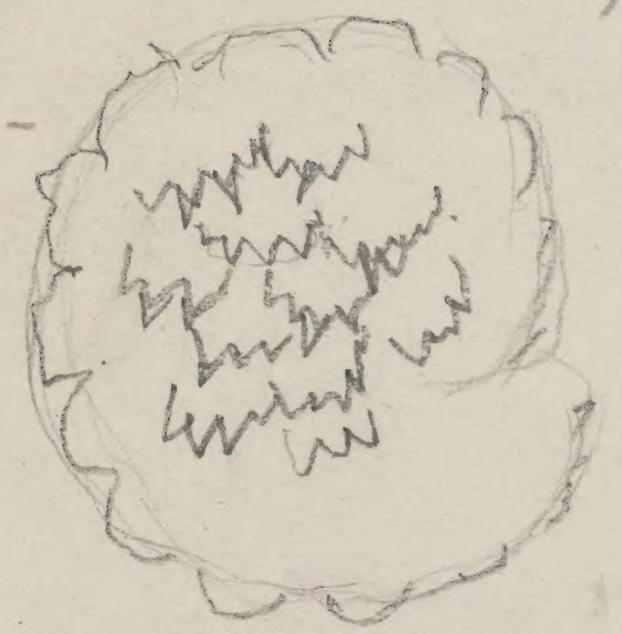
Jun 15 1881

×60 Asterina
Anson



Head with metallic lustre, dark
toothed tubercles, or with scales
imbricately covering one another

40 forty stamens
6 petals
flower yellow, to orange 1-10 Line diam

226

Rehright 874 1857 Copper mine ? the same

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Claytonia

VCV

Gray Man. Octob 1861

Parts' C. lanceolata & fig is a mixed up thing, asiatic and east & west American.

The allied forms are: 227

1, C. lanceolata Pursh fide H.B. Lambert. et. the corm rooted plant of the Rocky Mts & California. with sessile narrow leaves. — It may be a form of C. Caroliniana, which also occurs in Rocky Mts, — & that again runs indistinctly into C. Virginica — C. lanceolata seems to extend to Kotzebue Sd (Hook & Arn. Bot Beech. p. 123) — & to the opposite Asiatic Coast (Linnaea 6. p. 563. but Hook & Arn. C. Virginica from there is probably

2, C. tuberosa Pall ⁻ Wild Rely. ex Schultz. Syst. 5.436. & Fingl ⁻ H. Ross. is a perfect dry specimen of C. Cochrachelyi Cham. Lin. 6. 563 same plant. C. acutifolia Pall. ⁻ Wild Rely. l.c. is a broader leaved form; verging towards

3. C. arctica Adams founded on the most reduced and antic form of the species to which belong C. Sibirica Fallas ⁻ H. Wild (but not Lin (C. Sibirica Lin = C. alsinoides Sims) de Gray. notes) and C. Ivaniana Schult, C. acutifolia Ledeb, C. arctica var Maxima Cham. —

& Parry's plant seems an extreme form, var megaphylla of this, remarkable for the shape & length of radical leaves.

Rumh. description & figure

do not agree: the radical leaves, figured, are probably from the s. terrian plant, the Carline leaves are narrower the any s. terrian form and the naked roots must belong to the Rocky mt. plant, which may retain Rumh's name (= C. Caerulata fl. Hook bor. Am. = C. Caroliniana var sessilifolia Torr. Pac. R.R. 4. p. 70.

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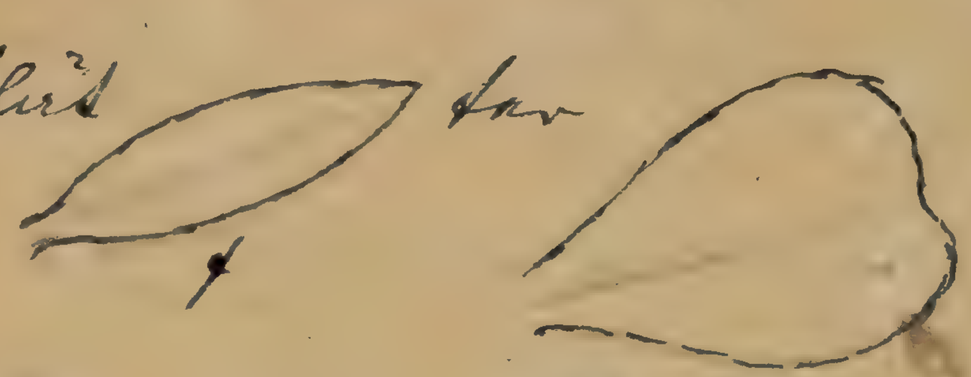
Cuntia Portulac. wolfsmilchartig P. Port: sativa? P. pilosa

a petala e la g

b Pistille h

c Stiel



Portulac. gezählte Stamina. 20, 25, 27. Pistill 6theilig
petala ~~nicht~~ mehr oder weniger zur Hälfte verwachsen, Kelch 2spaltig, Frucht-Kapsel mützenförmig aufspringend. Blüthe sehr wenig von der Größe gewechselt. Stengel 5. Zweig. Geschmack säuerlich.

Portulaca pumpelliana Portul. gezählte stamina 9, 10, 12. Pistill nicht beobachtet. Stengel roth. Blätter mit weißem Rand. Stengel 5theilig. petala etwas ausgerandet, klein, gelb. Geschmack säuerlich.

Portulacca sativa. (Torr. gibt keine Ausführung) gezählte stamina 17. 18. 19. Pistill 4theilig. Rand der Blätter mit weißem Saume besetzt. Stengel röthlich und dick saftig grün mehr weniger weißlich. Geschmack säuerlich. Die Blätter der Blüthen gezähnt
Pilosa. stamina 14, 15. 23. pistill 5theilig. petala hinfällig
bis kurzwimperig. zuweilen finden die Früchte abgerundet gelappt.

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* P. spathulatae glaberrimae caule tereti, foliis spathulatis, obovatis, sepalis alato-carinatis, ~~ad capsulae maturae~~ cum operculo capsulae maturae deciduis ~~persistentibus~~, petalis flavis, emarginatis s. 6-lobis, capsulae margine circulari ~~utrinque~~ tumido

1. P. oleracea L. foliis obovatis, spathulatis, apice rotundatis albastro ~~subtruncatis obtusis~~, compresso ovato acuto sepalis carinatis; staminibus 7-9, stigm. 5 stylum brevem superantibus; seminibus minoribus, minute subcente reticulato-scrobiculatis, nigris.

St Louis, very common. Time of flowering (in August) in direct sunshine between 9 and 10 o'clock a. m.

2. P. retusa n. sp. foliis cuneatis retusis s. emarginatis, albastro compresso, ~~ordinato~~, obtuso; sepalis late carinato-alatis; staminibus ~~8-10~~ (17-19 in plantis parvulis 7-9 limbi); stigm. 3-4 stylum aequantibus s. eo brevioribus; seminibus majoribus, subcente reticulato-tuberculatis, nigricantibus.

Grand Prairie region of the Llano, Western Texas. From Lindheimer, seeds raised at St Louis 1849. — Time of flowering 8½-9½ a. m.; somewhat earlier than the common species. — Similar to it, but easily distinguished by the broader retuse leaves and the broader calyx; and confirmed as a distinct species by the larger, somewhat paler, more distinctly reticulate seed. Number of stamens variable. In large specimens (leaves several inches in diameter, stems at base 6-7 lines in diameter) the number counted was 15; Lindheimer states as the usual number 17-19; and in small specimens I have found 7-10. — But stigmata almost invariably 4 (only 3) parted, and as long or shorter than style, while in the common species they are much longer.

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** *Lanceolatae* glaberrimae caule angulato foliis superioribus lanceolatis, sepalis v. ± ovatis post anthesin deciduis, petalis plerumque ~~conniventibus~~ elegantur conspicuum, capsulae ala orbiculari latissima, conspicua.

3. *P. lanceolata* n. sp suberecta, foliis inferioribus spathulatis obtusis, superioribus lanceolatis; petalis obovatis v. oblanceolatis, acutiusculis v. cuspidatis; staminibus 7–27; stigmatibus 3–6; capsula turbinata, versus apicem ala orbiculari lata cincta; seminibus majoribus echinato-tuberculatis, cinereis.

α. ~~vesicaloris~~ major, petalis obovatis rubris basi flavis, apice ~~rubris~~, staminibus 12–24, stigmatibus 5–6, linearibus, capsulae ala orbiculari, plana.

β. ~~minor~~, petalis oblanceolatis, plerumque totis flavidis, rarius apice rubellis, staminibus 7–12; stigmatibus 3–4, ovato oblongis; capsulae ala subpentagona, undulata.

Cl.

On the Llano, Texas, June. Soil — mixed from Leeds coll. by T. Lubbock at Austin. — I am in doubt about the identity of both forms, but the seeds, which in most species of this genus form a distinctive character, are absolutely identical; — the number of stamina & stigmata, and even the color and size of the flowers appears to vary also; so that besides the shape of the circular wing no constant character is left. Lubbock says that the leaves of α have an acid taste, and those of β a flat nauseous taste. — ± flowers 4–6 lines in diameter, very pretty in the larger species, open from 8–9 a.m., before the day of the other species. — Stem erect, a few inches high, branched, or a foot or more high, ascending, very much branched; — Leaves ½–1 inch long, 1–3 lines wide, ± (with the wing) ½ — Capsule 2–2½ lines in diameter

*** Teretifoliae ad axillas pilosae, caule teretifolis plus minus teretibus, basi paulo productis sepalis membranaceis carinatis, dum operculo capsulae maturae deciduis; petalis violaceis; capsulae margine circulari tumido

4. P. pilosa L. sepalis lineari oblongis, petalis ovato-oblongis, obtusis v. retusis v. emarginatis, duplo brevioribus, staminibus 15-25, stigmatis 5-6 radiantibus, seminibus undulatis nigris, opacis minute tuberculatis.

Texas, New Mexico, Mexico etc. - flowers open from 9-11 or 12 in bright sunshine. 4-5 lines in diameter. Stigmata glandular hairy only on the margins, purple

5) P. Gillesii Hook sepalis orbiculato-ovatis, petalis orbiculato-obcordatis tam quatuor brevioribus, staminibus numerosissimis (60), stigmatibus sub 5 exsertis longe brevioribus; seminibus parvis majoribus, tuberculatis, cinereis metallice lucidis.

Cultivated. Open from 8-2 or 3 p.m. in 20-24 lines in diameter
sunshine; stigmata glandulars - hairy on margins and upper surface, yellowish or greenish. ——

Sept 4th 1849

Contr. Febr. 1851

Portulacca spathulatae: operculo capsulae acuto apice
contracto semina unum plus duplo includente

Seed of european Portulaca oleracea are larger than even those of P retusa and opaque, black; could it and the american common species be different?

Portulacca pilosa: specimens from six different localities from the Arroyo Wislizenus, collected by Lindheimer & Wright are all somewhat different in the size & appearance of the seeds and in the

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shape of the capsule but these characters do not appear to be permanent enough to distinguish them specifically or even to characterise distinct varieties.

In some the capsule is small, with a long stipe, the operculum conic, the seed very minute and more or less shining with metallic lustre (Wright № 23, Linden for the Linnæan 1847.) — In others the capsule is more than twice as large, operculum semi-globose stipe very short, seed larger and black, opaque without lustre (Linden — 452 for Mexico Brongn. 1845 Bryol. 112. 1843.)

Wrights 22 & 24 are intermediate forms with rough shining seeds of middle size; Wright № 23 has by far the smallest seed of any. A careful examination of the living plant only could put all doubts to rest

Portulaca retusa E. A specimen collected by Wright № 21 appears to be this species; the calyx agrees perfectly with the specimen, the seeds are of the same size and roughness, but, black not greyish — but the only specimen before me is a small erect plant, and without any flowers so that I could not examine the style style long! — the shape of the sepals is decisive

230

August 18th 1849

Portulaca pilosa Lin, raised from Texas seeds

Distinctive characters from Portulaca Gilliesii of our gardens.

flowers clustered, open only from 9 to 11 a.m in bright sunshine, about 8 lines in diameter, when fully open: sepals linear oblong obtuse, half as long as the oblong obovate obtuse & obtuse, mucronate petals, which are about 3 lines long and one wide: stamens 20 stigmas about six. hardly longer than stamens, purple, flattened, glandular hairy on the margins only; seeds black tuberculated, opaque.

Portulaca Gilliesii Hook flowers open from 8 to 2 or 3 in bright sunshine (not in dark or dim weather) about 20-24 lines in diameter, sepals orbicular obovate, 1/3 or 1/4 the length of the orbicular obcordate or somewhat bilobed petals, which are about 12 lines long, and 10 wide: stamens about 60; stigmas about 5 exsert above the stamens, yellowish or greenish, flattened glandular hairy on the margins and upper surface - seeds steel gray with metallic lustre, tuberculated a little larger than those of P. pilosa

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579 Pl. Lush.

Bottneriaceae

Talinum aurantiacum E

231

radix tuberosa, caule ascendente, ramoso, foliosso, foliis ramosis, lanceolatis s. lineari lanceolatis, subsessilibus, floribus axillaribus, ringulis, pedunculo supra basin articulato bi-bractolato; capsulis ovatis acuminatis, pentagonis pentatrivalvatis; petalis ovatis mucronulatis, ex flavo aurantiacis, staminibus 25; filamentis subulatis, stylo ~~crassiusculo~~, x stigmatibus 3 crassiusculis; capsulis deflexis.

Perennial, but with me flowering first summer; stems 6–12 inches long, at last decumbent, or ascending; leaves 1½–2 or even 3 inches long 2–4 lines wide; pedicels of flower 4½ lines long; sepals same length; petals 5 lines long 3 l. wide. Seeds elegantly striated marked black, much larger than of the other north american species

Raised from Texian Seed

x Seminibus lineis gyratis carinatis et striis transversis elegantes notatis, ~~tuberculo~~ albo magnifico instructis.

Root white fleshy irregular oblong or elongated oftn bifurcated tubers. — flowers several times — the year after heavy rains

The same species was found by Dr Wislizenus near Ojo del Muerto in the Journada del muerto in New Mexico. The specimens are more erect, with leaves narrower, but not otherwise distinguishable from the Texan plants.

Talinum sarmentosum perennis, radice incrassata, caule prostrato ramis sarmentosis, ~~laxis~~ debilibus, ascendentibus potissis; foliis ramosis late ovatis, ~~acutis~~ ~~obtusiuscul~~ ~~infimis~~ ~~basi~~ basi attenuatis, caulinis axillantibus, subtrifloris (ramis compositis) versus apicem laxe paniculatis, floribus longe pedicellatis; ~~sepalis 2 ovatis~~ sepalis 2 ovatis acuminatis deciduis petalis ~~violaceis~~, staminibus 15; stigmatibus 3, nitentibus minute tuberculatis.

New Braunfels, among shrubs on the Guadalupe. - August. Stems prostrate (often 6 - 10 feet long, branches ascending among the shrubs) 1 inch). Leaves in the rosette 2 - 4 feet long. - Lower leaves 2½ - 3½ inches long, 1 - 1¾ inches wide, petioled 6 - 12 and more lines long, thickened at the apex; sepals about 1 line long, flowers apparently 4 - 5 lines - diameter, purple; capsule 3 valved, ~~dark~~ subglobose, about 1 line in diameter.

Talinum linearifolium, caule erecto ramoso, ramis strictis erectis; foliis, linearibus elongatis basi attenuatis, ramosis; pedunculis axillantibus subtrifloris; sepalis ovato-lanceolatis longe acuminatis

Carizal, between El Paso & Chihuahua, 150 miles south of the former place, ~~begins~~ to flower about 7th and 8 August. — Dr. Wislizenus. — My specimen is about 15 inches high erect with sturdy erect branches; leaves 3 - 4 inches long, ½ to 1½ lines wide*; only a few flowers about 5 lines long, flowers red, larger than in Talinum ~~sp~~ the fruit not seen; last grown seed apparently finely marked

* pedunculus one - inch, pedicelli 9 - 10 lines long.

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Feb 1851

Talinum angustissimum n. sp. radice tuberosa, caule herbaceo ramoso, foliosa; foliis plenis (linearibus) (angusta) carnosis; floribus axillaribus singulis, pedunculis ad basin vel vix supra basin articulatis 2 bracteolatis, sepalis ovatis cuspidatis, trinerviatis, submembranaceis petalis brevioribus; ovario stamina vix longiore, seminibus lineis gyratis carinatis et striis tenuissimis transversis elegantes notatis.

Wright, Texas No 76

Very near T. aurantiacum, but apparently well distinguished by the smaller stature, smaller, very narrow leaves (1 or 1½ inch long, shorter pedicels, which are articulated only (about 2/10 of a line above the base almost at base or more correctly speaking) shorter sepals smaller, membranaceous, cuspidate (not bristle pointed, fleshy, tuberculose and long gradual acumination; petals apparently of the same color; style hardly longer than the small ovary, and as long as the stamens — while in Tal. aur. the it is about twice as long as the ovary, and considerably exceeds the stamens. Seeds very similar but smaller

spathulatum

Talinum lanceolatum n. sp. caule (v. ramis?) erecto, gracili foliosa; foliis carnosis, oblanceolatis - spathulatis, acutis brevitur cuspidatis, in petiolum longe attenuatis; cymulis axillaribus subtrifloris demum apicem versus in paniculam compositis; bracteis ovatis cuspidatis minutis, deciduis; floribus longe pedicellatis; seminibus nigris nitentibus tuberculatis in striis gyratis dispositis.

Wright, Texas No 35.

Very near Talinum paniculatum (Ark. 19) well distinguished by the narrower, spathulate leaves, 2-2½ inches long & ¼ inch wide; by the very short ovate (not = T. s. subulate) bracts and the much larger capsule and much larger seed, which are much more distinctly tuberculate, and the tubercles regularly arranged in spiral lines — not seen

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